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Summary by the Chair of the panel discussion on the theme "Gender and science and technology", held at the thirteenth session of the Commission on Science and Technology for Development

Note by the Secretariat

Pursuant to Economic and Social Council resolution 2008/29, in which the Council requested the functional commissions of the Council to contribute to the annual ministerial review and to the Development Cooperation Forum, the summary by the Chair of the panel discussion on the theme "Gender and science and technology", held at the thirteenth session of the Commission on Science and Technology for Development (17-21 May 2010, Geneva), is attached to the present note (see annex).

* See E/2010/1.

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Annex

Summary by the Chair of the panel discussion on the theme "Gender and science and technology", held at the thirteenth session of the Commission on Science and Technology for Development

1. At the 5th meeting of its thirteenth annual session, on 19 May 2010, the Commission on Science and Technology for Development held an interactive expert panel discussion on the theme "Gender and science and technology", as a contribution to the 2010 annual ministerial review of the Economic and Social Council on the theme "Implementing the internationally agreed goals and commitments in regard to gender equality and empowerment of women". The panel stimulated thinking on strategies and methods to involve women in the process of technology development, promote women's increased involvement in science and technology decision-making and systematically incorporate women's perspectives into the formal science and technology system.

2. The panel, moderated by Sherry Ayittey, Minister for Environment, Science and Technology of Ghana, was composed of the following experts: Shirley Malcom, Head of the Directorate for Education and Human Resources Programs of the American Association for the Advancement of Science and Co-chair, Gender Advisory Board of the Commission on Science and Technology for Development; Dafne Cristina Sabanes de Plou, Regional Coordinator of the Women's Networking Support Programme in Latin America of the Association for Progressive Communications; Sabine Süsstrunk, École polytechnique fédérale de Lausanne-Women in Science and Humanities Foundation, Switzerland; and Vijaya Kumar, Chair of the Industrial Technology Institute, Colombo.

3. Statements and comments were made by participants from Austria, Iran (Islamic Republic of), Israel, Kenya, Lesotho, Pakistan, the Philippines, Portugal, South Africa, the Sudan, Tunisia and the United States of America, as well as representatives of civil society and United Nations organizations.

4. The panel noted that gender equality was fundamental for poverty reduction, economic and social development and reaching the Millennium Development Goals.

5. Women were central to socio-economic development through their productive and community management responsibilities. They made a major contribution to the production and preparation of food and the provision of energy, water, health care and family income in developing countries. There was general agreement that efforts should be made to ensure that girls and women received a scientific and technical education, so that they could apply that knowledge in the performance of those tasks and roles.

6. It was also noted that in many communities in developing countries, women were the primary holders of indigenous knowledge and know-how on sustainable environmental use and management. Women's local knowledge and know-how in areas such as food processing and livestock production, which had been inadequately addressed by the formal science and technology system, should be preserved and promoted for the benefit of their communities. Efforts should be

made to promote mutually beneficial exchanges between modern and traditional knowledge systems.

7. Examining the role of women in promoting science and technology should also entail fully recognizing women's indigenous intellectual rights, in particular paying special attention to the gendered nature of these rights.

8. It was agreed that there was a pressing need to move towards a greater role for women in science and technology, as well as in making a greater use of science and technology to address women's needs. The pervasive role of women in harnessing the benefits of scientific and technical information was emphasized by all participants. Women's economic empowerment required that more women gained access to an education in science and technology, pursued scientific and technological careers and engaged in science and technology decision-making. Governments should make it viable for women to participate in science and technology endeavours.

9. Women still faced an array of social and cultural impediments in male-dominated societies worldwide. They were underrepresented at every level of science and technology. They were undereducated, had fewer credentials and were underemployed in those fields around the world.

10. One panellist used the metaphor of a "leaky pipeline" to describe the steady attrition of girls and women throughout the formal science and technology system, from primary education to science and technology decision-making. Barriers to the participation of women and girls in science and technology included sociocultural attitudes and existed in education, academic appointments and the science and technology professions. In addition, there was often a glass ceiling, an invisible, sometimes unintentional, barrier that prevented women from advancing in science and technology.

11. Some participants expressed concerns over the apparent disconnect between a high degree of participation of women in higher education and a low degree of participation in professional life in their respective countries. One participant traced this problem to a lack of relevant policies, inadequate or irrelevant science curricula, a lack of role models, a lack of teaching resources and cultural practices, and called for a need to address gender equity in science and technology by applying an appropriate mix of strategies learned from best practices.

12. Science education of girl children at an early age was identified as an effective strategy to stimulate women's interests in pursuing higher education in engineering, science and mathematics disciplines. Participants expressed concerns over gender stereotyping, gender profiling and gender discrimination and considered that education played a central role in reversing gender prejudices in science and technology.

13. One participant observed that formal science and technology education was often characterized by a male-dominant environment, where teaching methods and materials were not always sensitive to gender concerns. There had been some success with science and technology training courses specifically designed for women.

14. It was argued that careers in science and technology needed to be more attractive and rewarding so as to attract a larger section of bright young minds to the field.

15. Women's participation in the formal workforce would also hinge on a gender-equal pay structure that took into account women's participation in the informal sector, including home-based work, and women's contribution to the family income, including activities such as childbearing and household production. Participants emphasized the need to close the gap that existed in most countries between men's and women's wages. It was suggested that the International Labour Organization should work with the United Nations Conference on Trade and Development in examining flexible work arrangements (such as part-time work) that catered to the specific needs of women.

16. Participants pointed out that current structures and processes for decision-making in science and technology for development did not systematically take into account the needs and concerns of both women and men in a gender-disaggregated manner. Women's needs and interests were often neglected and underrepresented. Participants emphasized the need for the policy development processes to be more "gender aware": that the potential implications of any planned policy or programme for both men and women were adequately assessed to ensure that they benefited equally. In that regard, it was important for women to be involved throughout the decision-making process.

17. Integrating gender mainstreaming strategies into national policy frameworks required translating gender equity goals into concrete legal actions and policy instruments, and enforcing preferential employment, promotion, training and education of women. In scientific fields where women are underrepresented, measures such as financing special programmes and projects targeting women should be taken. One participant shared Austria's successful experience of introducing affirmative action in recruitment for academic vacancies and enforcing a 40 per cent representation of women on science and technology decision-making and policy advisory bodies, a proven strategy that several participants expressed an interest in promoting.

18. Many speakers reported public policies adopted in their countries that tapped into the talent pool of women in science and technology as a way of improving their overall levels of national science and technology capacity. A high degree of female participation in science and technology had the potential of advancing a country's economic development. In Tunisia, indicators that measured women's participation in information and communications technologies (ICTs) had shown that investing in early ICT education for both boys and girls had encouraged more women to specialize in science, which had resulted in narrowing the gender digital divide and an expansion of the nation's science and technology talent pool. Thus, it was believed that there was a significant rationale for investing in science education as a way of expanding a country's human resource base for development.

19. Participants observed that investing in women in science and technology depended on making financing readily available for targeted actions. Many participants reported on Government initiatives such as scholarship schemes, prizes and programmes that supported women in pursuing education and career development in science and technology. Education incentives from Governments, non-governmental organizations and institutions that supported girls and young

women to excel in science and technology were equally important. Several participants cited the L'Oreal-United Nations Educational, Scientific and Cultural Organization "Women in Science" awards as a good-practice example.

20. One of the panellists presented a case study on how to incorporate gender elements into ICT project assessment. Gender evaluation methodologies could be used to investigate whether ICTs were being used in ways that changed gender biases and roles. Gender evaluation methodologies provided a means for determining whether ICTs were improving women's lives and gender relations and also to ensure that gender concerns were integrated into a project's planning process. These methodologies had been used in 32 capacity-building projects covering four regions: Asia, Africa, Latin America and Central Europe. The panellist reported that a trickle-down effect had been observed in many gender evaluation methodology projects and that through training the projects were able to empower women by encouraging them to be more proactive decision makers and take on leadership roles in their communities.

21. Gender budgeting analysis had proven to be a useful way for measuring whether spending was adequately suited to women and men's needs. The approach helped institutions to achieve gender equality through making better financial decisions. Introducing gender budgeting analysis into development initiatives such as the Massachusetts Institute of Technology NextLab programme and the One Laptop Per Child initiative was advocated by one participant.

22. Many countries shared country statistics on women's participation in education and professional careers. Several developing countries were able to report participation by women in science education of 40 to 50 per cent. The collection of gender disaggregated data for policymakers was emphasized by several participants.

23. Several participants discussed the use of ICTs as an empowering tool for women by helping them to access information, education, services and markets. Women could benefit greatly from innovative and effective ways of using electronic applications and services to network and to engage in entrepreneurial activities. Women scientists and researchers had also benefited from ICT-enabled networks.

24. Governments, particularly in the least developed countries, where large gender disparities exist, should play a positive role in achieving gender equality in higher education and in the workplace and making career advancement possible for women working in science and technology.

25. The Commission on Science and Technology for Development had historically played a leadership role in examining gender and development, building a research and development talent base, and addressing challenges faced by women in development and in how technology could be used to achieve developmental goals. The Commission was the only functional commission of the Economic and Social Council that had instituted a Gender Advisory Board, a gender and science and technology body set up in the 1990s that had contributed to the process leading up to the Fourth World Conference on Women held in 1995 in Beijing. Panellists expressed the need to revitalize the Board and to ensure that a gender perspective was adequately reflected in all aspects of the Commission's programme of work. They also stressed the need for the Commission secretariat to maintain regular contact with the Board secretariat.

26. Participants believed that society needed more women as leaders in science and technology. Several participants felt that as the torch-bearer of science, technology and innovation, the theme of gender and science and technology should become an institutionalized theme discussed annually in the Commission. They called on the Commission to invite to its annual session women professionals in the area of science and technology, entrepreneurs and other stakeholders to share ideas, experiences and success stories, as well as failures and obstacles, in closing the gender divide in science and technology. It was also proposed that the Commission could consider engaging women as ambassadors of science, who would serve as positive role models.